

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 January 2004 (22.01.2004)

PCT

(10) International Publication Number
WO 2004/007782 A1

(51) International Patent Classification⁷: C22C 5/00, 5/04

Duncan, Roy [GB/GB]; 68 Warren Wood Drive, High Wycombe HP11 1EA (GB). HYDE, Robin [GB/GB]; 5 Wilbury Close, Letchworth SG6 4JX (GB).

(21) International Application Number:
PCT/GB2003/003037

(22) International Filing Date: 11 July 2003 (11.07.2003)

(74) Agent: WISHART, Ian, Carmichael; Johnson Matthey Technology Centre, Blounts Court, Sonning Common, Reading RG4 9NH (GB).

(25) Filing Language: English

(26) Publication Language: English

(81) Designated States (*national*): JP, KR, US.

(30) Priority Data:
0216323.6 13 July 2002 (13.07.2002) GB

(84) Designated States (*regional*): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

(71) Applicant (*for all designated States except US*): JOHN-
SON MATTHEY PUBLIC LIMITED COMPANY
[GB/GB]; 2-4 Cockspur Street, Trafalgar Square, London
SW1Y 5BQ (GB).

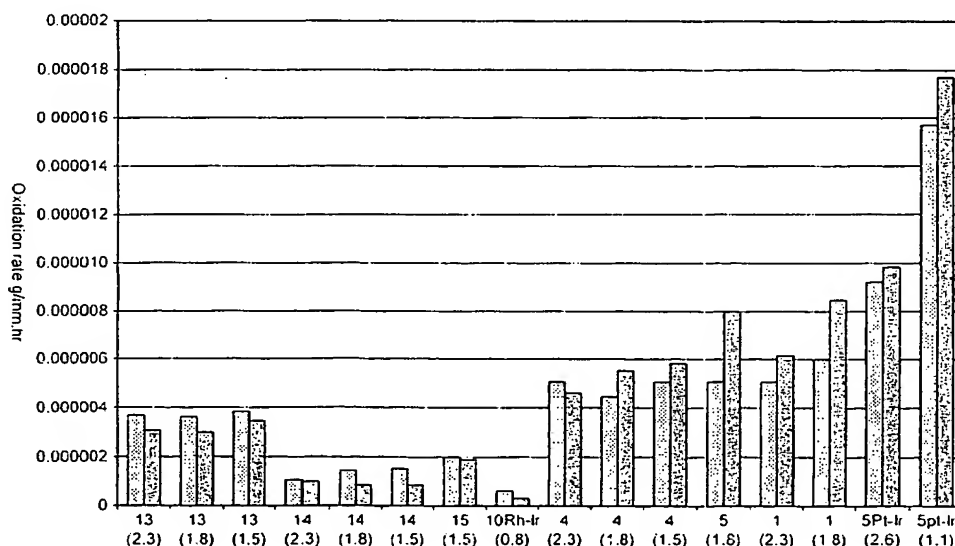
Published:
— with international search report

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): COUPLAND,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ALLOY



(57) **Abstract:** An iridium alloy consists essentially of iridium and at least one of W and Zr, and optionally Rh. When present, W comprises between 0.01 and 5 wt % of the alloy; when present in combination with W, Zr comprises between 0.01 and 0.5 wt % of the alloy; when present alone or in combination with Rh only, Zr comprises between 0.01 and 0.09 wt % of the alloy; and when present, Rh comprises between 0.1 and 5 wt % of the alloy. The alloys may be modified by the addition of platinum and other platinum group metals and base metals. The alloys demonstrate enhanced physical and chemical properties and are suitable for use as electrode materials in spark plugs and other high temperature applications.

WO 2004/007782 A1